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Between Myth and Reality – an Exploratory Study of Secondary School Pupils' Information Behavior

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Abstract

Many myths exist about the Google Generation which tend to overestimate the positive impact of ICT's on young people. This paper presents and discusses the results of an exploratory case study of 43 Danish secondary school pupils' information behaviour. Four research questions guided the study: 1) What characterises the information behaviour of Danish secondary school pupils? 2) Does the information behaviour differ across year of study? If so, in which way does it differ? 3) How is information seeking conceptualized and experienced? 4) How is the study centre and library conceptualized and experienced? The participants were 20 pupils at their first year of studying (1g) and 23 pupils from their third and final year of studying (3g) – all representatives of the Google Generation. Two identical surveys were handed out in class and followed by two focus groups; one with 6 participants from 1g and another with 7 participants from 3g. In addition, the librarian at the secondary school was interviewed for background information and her experiences of pupils' information behaviour. The results of the pilot study will provide the foundation of a larger study on Danish secondary school pupils. It was found that the information behaviour of secondary school pupils to a large extent confirm the negative myths of the Google Generation in terms of information literacy and preferences for information resources. However, pupils at their third year generally tended to be more critical and to demonstrate more critical information skills, particularly at a cognitive level. Differences across gender were also identified in this study. As an interesting finding many of the pupils actually *knew* what would be the optimal way of acting when searching for information, but did not seem to know *how*. In addition, this 'optimal' behaviour was found to be in conflict with a rational approach to information practice across secondary school pupils.

Introduction

In recent years there has been a growing research interest in young people' information behaviour (e.g. Fisher & Julien, 2009; Large, 2006; OCLC, 2006; Pors, 2005; 2007; Rowlands et al., 2008), particularly with a focus on how the internet and ICT's will impact the young and on the resulting implications for practice within the information and educational community. A special interest has been on the Google Generation – those born after 1993 - who have been growing up with the internet, mobile phones etc. In 2007 the British research group CIBER investigated the information and ICT behaviour of the Google Generation (Rowlands et al., 2008). According to this study the many myths about the Google Generation actually tend to overestimate the positive impact of ICT's on young people. The ubiquitous presence of technology has not yet resulted in improved skills in information retrieval, information seeking and evaluation. Information skills are needed more than ever if people should be able to navigate competently in the information society (Rowlands et al., 2008, p. 308). Libraries play an important role in facilitating and stimulating a competent information practice, but they are only one of many resources that young people use and not *the* resource of preference (OCLC, 2006; Pors, 2005; 2007; Rowlands et al., 2008)

At the international as well as at the national level there has been identified an intensive need for continuing educational research and inquiry into the dynamic nature of information behaviour of young people as well as their information and digital literacy skills (Alexanderson & Limberg, 2009; Large, 2006; Sundin & Francke, 2009).

Underlying the many studies of young peoples' information behaviour is, however, also a worry about the future of the library and its importance to young people: will they bypass quality resources as part of their educational practice, thus, how should libraries be developed and information literacy (IL) programs be implemented in order to attract young people and respond to their needs.

This paper focuses on the information behaviour of secondary school pupils and presents the results from a preliminary case study in a Danish secondary school. The aim of the study was to further explore the myths and forecasts about the Google generation.

Information behaviour is here defined as "…those activities a person may engage in when identifying his or her own needs for information, searching such information in any way and using or transferring that information" (Wilson, 1999, p. 249). The focus is on both cognitive, physical, affective and social aspects of information behaviour.

The Information Behavior of Young People

This section is based on some of the recent studies and investigations of the young peoples' information behavior in a global and a local perspective, and in a general and an educational context.

In contrast to earlier generations who gained their knowledge through books and libraries, the Google Generation turns to the Internet and search engines as their primary source of knowledge. A recent global survey by OCLC (2006) of existing and potential college students' information behavior found that 89 % (N=396) always begin an information search by use of search engines and that 93% were satisfied or very satisfied with their overall experience of using a search engine. College students still use the library, but are using the library less. It is evident that technology has transformed the information landscape, but in which way has this affected the way the Google Generation use technology, search for and use information. And how will that behavior influence the way the higher education student, the researcher and knowledge worker of the future approach technology and information. In commission by the British Library and

JISC the British research group CIBER came up with a report on the ICT and information behaviour of the Google Generation and discussed a number of hypotheses about their expected behaviour in five to ten years' time (Rowlands et al., 2008). According to this report the Google Generation is generally characterized by being more IT literate than earlier generations; the young people learn by doing and approach technology with high expectations of interactivity and speed. They multitask in every part of their life and transfer their use of IT for amusement to educational practice. 'Cut-and-paste' from digital text is a common strategy employed in an assignment context. The preferred search strategies are power-browsing, skimming and extensively clicking on hyperlinks. The young searchers generally perceive themselves as expert searchers and believe that everything can be found on the Internet (Williams & Rowlands, 2007). However, when looking more deeply into the information seeking behavior of the young a serious gap can be demonstrated between their experience and perception of own information skills *and* their actual performance. It is characterized by a generally poor understanding of their information needs, which implies difficulties in developing effective search strategies. They express the information need in natural language rather than reflecting on which keywords that might be effective and improve the search result. Little time is generally spent on assessing relevance, authority and accuracy. Further, they often have difficulties in assessing the relevance of a long list of search results and often print off pages after only a short glance at them. Many young people do not find library resources intuitive, but prefer Google which is simple and easy to use. With regard to the conception of information literacy as reflected by broadly accepted definitions (e.g. ALA, 1989; Bruce, 1997) the Google Generation is no more information literate than earlier generations. Rather, they represent a new challenge to the educational community.

Turning to a Danish educational context Pors (2005; 2007) has conducted two national surveys in which he investigated the information behaviour of Danish students in higher education (2005) and subsequently pupils in secondary schools (2007). Both studies were focusing on the impact from Google and other search engines compared to library resources on students' preferences and use of information sources. It was found that Google was the tool most heavily used for studying purposes. In general, however, secondary school pupils were far more oriented towards Google and other search engines than students at higher education. However, the use of the library and the study center increased across class level. The same increase in use was not identified among the students at higher education. Rather, using the library was domain dependent in that humanistic oriented students were found to use the library more than science oriented students. In both studies by Pors (2005; 2007) participants' use of the local library *and* the study center generally also meant a high level of use of digital resources. Another interesting finding was that behaviour differed across gender. Females, for example, more often used the local library or the study center, they more often used literature to supplement curricula or asked librarians for help. In contrast, males more often used Google. A difference across gender was also found in a recent discussion paper on information literacy (IL) in secondary schools (Holm et al, 2010). Three types of pupils were identified, that is, the 'swot-girls', the 'party-girls' and 'the it-boys'. While the first group was interested in doing it right, the last group was interested in doing it fast, each resulting in different learning outcome and implied different skills.

In line with the CIBER report, secondary school pupils tended to demonstrate a high level of self-efficacy with regard to information searching and a rational approach to information behaviour in general. In spite of differences between the two studies by Pors (2005; 2007) many similar behaviour patterns were identified leading to the conclusion that habits and preferences for library use and information resources are established *before* the students enter higher education.

Case Study

In autumn 2009 a case study was carried out at Frederiksborg Gymnasium (FG), a large Danish secondary school with over 1000 pupils (age 15 to 20). During three years of study pupils are prepared for any higher education of interest. After a general introduction for 6 months the pupils are separated by application in classes devoted to specific subject tracks. In 2005 a new reform for Danish secondary schools came into effect, which has implied among others that more attention and weight is put on pupils' studying competences, e.g. demonstrated by a new compulsory course in general study preparation. The aim of the course is to improve and support the pupils' ability to independently formulate a problem as part of an assignment, search and critically collect, analyze and use relevant information and present it in a meaningful way. Hence, more attention has recently been paid to information seeking as an important study competence in Danish secondary schools. In addition and with reference to the guide to the revised national legislation concerning the education for upper secondary school leaving examination (Undervisningsministeriet, 2008) the reform pupil is expected to be: independent, responsible and reflective, result oriented, being able to find, explore and gain new knowledge; being critical, creative and innovative and able to collaborate with other people. The library at Frederiksborg Gymnasium is referred to as the Study Center (SC), whereas the public library is referred to as the 'library'.

Research Questions

The aim of the case study was to further explore the myths about the Google generation in a secondary school context. The study was guided by four research questions:

1. What characterizes the information behaviour of Danish secondary school pupils?
2. How is information seeking conceptualized and experienced by secondary school pupils?
3. How is the local study centre and library conceptualized and experienced?
4. How does the information behaviour of secondary school pupils differ across class level?

The results of the case study will provide the foundation of a larger study on Danish secondary school pupils' information behaviour.

Participants

Two classes were selected for the study (43 pupils in total), a first and a third year class, hereafter referred to as 1g and 3g. The participants from 1g were 20 pupils, 11 female and 9 male with the average age of 16.

All of them had participated in an introduction to the Study Center, and 16 of them had participated in an introduction to information searching.

The participants from 3g were 23 pupils, 12 female and 11 male with the average age of 18. All of them had participated in an introduction to the Study Center, and 22 of them had participated in an introduction to information searching.

Data Collection

At start a short introduction to the study was sent to the two class contacts at FG and two weeks later a survey was handed out and motivated by the researcher in each class. The survey addressed demographic issues, the pupils' preferences and use of selected information sources as well as myths about the pupils' information behavior. With regard to the myths the participants were invited to state their agreement with 10 statements reflecting selected

hypothesis about the Google generation's information behaviour with a number from 1 (completely disagreeing) to 5 (completely agreeing) on a 5-point Likert scale. The more they agreed with a statement, the more they confirmed the hypothesis about the Google Generation. The survey was followed by two focus group interviews, one for each class, with 6 members from 1g in the first focus group and 7 members from 3g in the other. Each interview lasted 1 hour including an introduction to the focus group, a discussion of 5 selected themes associated with information behavior and a more detailed demographic survey to compare participants' profiles with their utterances in the interview. The selected themes concerned the participants' experiences, perceptions and reflections of 1) information needs and problem solving 2) information searching 3) outcome and relevance of a search result 4) management and use of information and 5) use of SC and the library.

Finally, the focus groups were followed by an interview with the librarian at the Study Center to get contextual information and her impressions of the pupils' information behaviour from their visits to SC. The interview lasted 1½ hour. All interview data have been recorded

Data analysis

All survey data have been processed in an Excel spreadsheet and all interview data have been transcribed and analyzed according to the 4 research questions of the case study.

Limitations

Due to the small scale of the study, that is, the number of participants and a qualitative case study approach (Exploring methods in information literacy research, 2007; Stake, 2000) no generalizations can be made from this study to other secondary schools pupils. Further, the data do not reflect participants' actual information behavior like data from search logs or direct observation, but show the pupils' perceptions, reflections and experiences on information behavior based on self-reporting and memory.

Results

The results are presented in 3 sections: 1) participants' preferences and use of selected information sources 2) participants' perceived information behavior in general and in a study context and 3) participants' information behavior in a study context as perceived and experienced by the librarian at SC. To compare results across class level data from 1g and 3g are generally presented separately.

Preferences and Use of Selected Information Sources

Table 1 shows the participants' preferences for selected physical and digital information sources across 1g and 3g and the purpose of use. The dotted circles mark data associated with web-resources (Google, Facebook and Wikipedia) and the black circles mark the library resources (Bibliotek.dk, the digital and physical library and the Study Center).

As can be noticed Google and Facebook are used by all (except for 1) and preferred to all other information sources in the survey independent of class level. However, Facebook is used by more pupils from 1g on a daily basis (80%) compared to 3g (65%), and primarily for communication and inspiration. Google, on the contrary, is used in relation to studying, to find facts and material and for inspiration and other purposes such as finding pictures or sound. The same pattern of use is reflected with regard to Wikipedia, which is used by all participants, and even on a daily basis or more times a week by half of the participants.

Sources/ Frequency of use	Facebook		Wikipedia		Bibliotek.dk		Google		Local library (digital)		Local library (physical)		Study Center at FG	
Class level	1g	3g	1g	3g	1g	3g	1g	3g	1g	3g	1g	3g	1g	3g
Heard about	0	2	0	0	4	7	0	0	7	7	6	3	9	1
Daily	16	15	0	4	0	0	13	15	0	0	0	0	0	0
Once a week	1	0	4	5	0	0	0	1	0	0	0	0	1	5
More times a week	3	5	9	7	0	0	6	5	1	0	0	0	0	3
Once a month	0	0	5	2	2	7	0	1	4	6	6	10	7	7
More times a month	0	0	2	5	0	3	1	1	0	2	1	5	1	6
Never	0	1	0	0	14	6	0	0	9	8	6	5	2	1
Total number (N)	20	23	20	23	20	23	20	23	21	23	20	23	20	23
Purpose of use	More x's allowed													
Communication	20	20	1	0	0	0	0	0	0	0	0	0	0	2
Study purpose	4	0	14	14	4	8	15	16	4	6	7	12	10	19
Finding facts	3	2	18	22	3	4	16	20	4	2	4	9	10	13
Finding material	0	0	14	10	3	11	16	20	4	10	8	16	9	19
Inspiration	7	1	5	12	3	1	13	16	0	0	0	7	4	4
Other	6	5	2	3	2	3	6	4	0	3	1	2	0	1

Table 1. *Secondary school pupils' preferences and use of information sources across school year (1g and 3g) based on the survey hand out in class. 1g: N=20; 3g: N=23. The dotted circles mark the web-resources, whereas the black circles mark the library resources. Bibliotek.dk is a web based Danish Union Catalogue*

In contrast, none of the participants is using library resources on a daily basis. Actually 70% of 1g-participants do not know of or use Bibliotek.dk, a national OPAC; 45% do not know of or use the local *digital* library, while 30% do not know of or use the *physical* library. In comparison only 10% are not aware of the Study Center. The pattern tends to change across classes, in that more pupils from 3g are using library resources and more heavily than pupils from 1g. Those who are using library resources are primarily using them for study purposes, finding facts and material – and less for inspiration. If looking at the use of library resources across gender, female pupils tend to prefer library resources more often than male pupils as shown in Table 2.

	Bibliotek.dk		*Local library (digital)*		*Local library (physical)*		*Study center*	
	Female	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**
Once a week	0	0	0	0	0	0	3	3
More times a week	0	0	0	0	0	0	2	1
Once a month	4	5	7	3	9	7	8	6
More times a month	2	1	2	0	3	3	4	3
Total	**6**	**6**	**9**	**3**	**12**	**10**	**17**	**13**

Table 2. *Use of library sources across gender, independent of class level (1g and 3g). The number refers to number of participants.*

The participants also commented on their use of information sources in the focus groups. With regard to the *1g- pupils* books are used very seldom; the Internet and Google *are* the information sources. However, some of the participants also mention a web based Danish encyclopedia called 'Den Store Danske' and 'family' as important sources. They seldom use the references suggested by the teachers. With regard to the *3g- pupils,* the internet is used for actual events and subjects, whereas the library is used for historical issues. The book is important in major assignments to all participants in 3g, but it is time consuming to find the 'right' book. Articles and interviews are searched on the internet and in some cases in the newspaper article database, Infomedia. Printed encyclopedias are often used as a first step in an information seeking process or as a supplement to Google and Wikipedia. Library resources are primarily used in relation to major assignments, but they are experienced as very time consuming to use.

Perceived Information Behavior

The survey data across class level (1g and 3g) regarding the 10 statements about the Google Generation are presented in Figure 1. The differences across class level are worth noticing in that participants from 1g generally tend to experience information seeking as less problematic and to approach information searching with more optimism and confidence than the participants from 3g. You may also say that the participants from 3g tend to approach information seeking more critically.

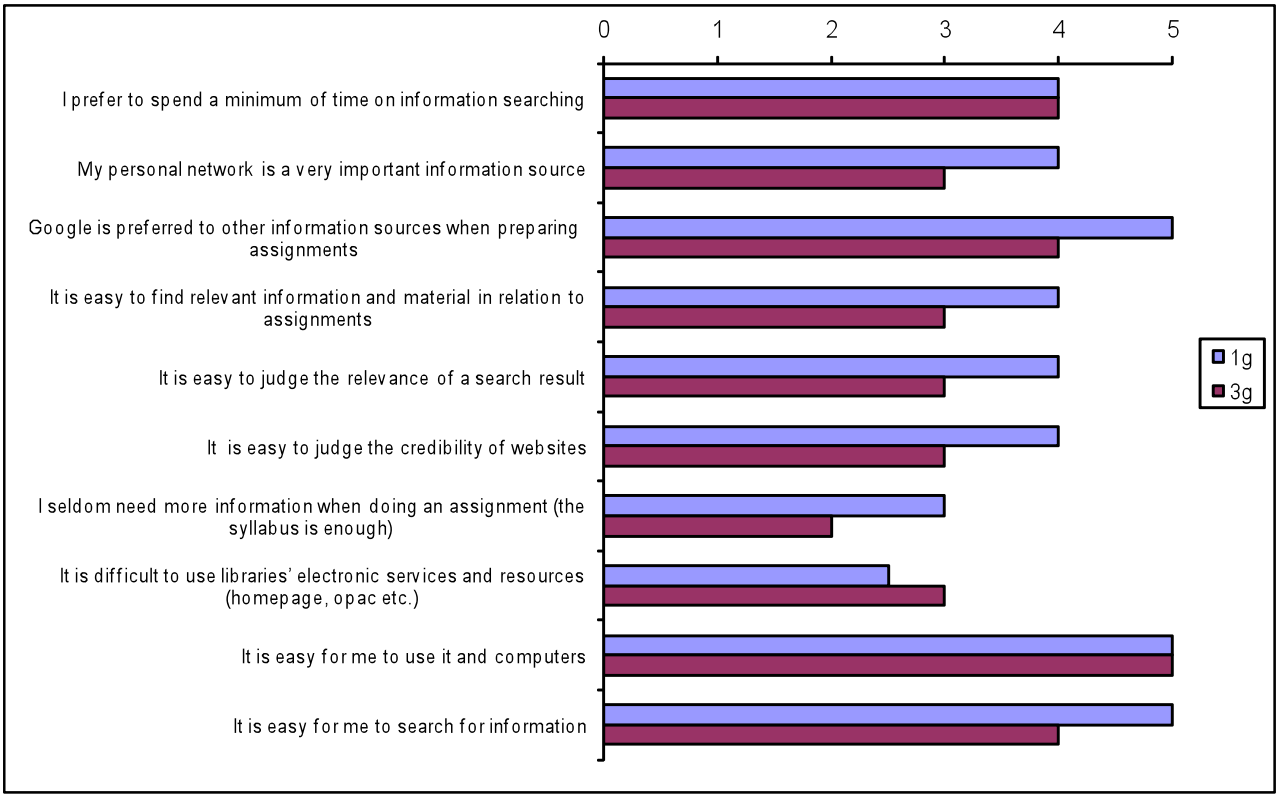

Figure 1. *Secondary school pupils' perceived information behavior across class level (1g and 3 g) as expressed by the median value of 5 agreement values (1 to 5), which were given by participants' in response to 10 statements associated with the Google generation. The agreement values are: 1=completely disagreeing, 2= primarily disagreeing, 3=neither disagreeing nor agreeing, 4) primarily agreeing, 5=completely agreeing. 1g: N=20; 3g: N=23.*

The 10 statements were further discussed in the two focus groups, initiated by the following four questions:

1. What is the first thing that comes into your mind when I say information searching?
2. What is the most difficult thing about information searching?
3. What makes it easy to search for information?
4. If you should give somebody a good advice in relation to information searching what would that be?

All but one of the participants across class level claimed that "Google" was the first thing that popped up as a respond to the trigger word 'information searching'. Abbreviated answers to the other three questions are shown in Table 3 below.

What is the most difficult thing about information searching?
First year pupils (1g):
• *To assess the relevance of a search result* • *To search on sub-topics, meaning to search more precisely* • *When you have found something and need to make the text into your own* • *Difficult with books as you cannot use the text in your assignments in the same way [as text on the Internet]* • *Difficult with the many login codes for the various databases*
Third year pupils (3g):
• *To be patient and leave enough time to find the right [material]* • *Difficult to use search techniques; I just write a few words; difficult to limit one's search* • *To distinguish between relevant and not relevant; a lot of wasted time associated with relevance assessment* • *To assess the credibility of resources and to know whether they are objective* • *To cope with a large search result*

What makes it easy to search for information?
First year pupils (1g):
• *Fast access, the Internet is far more integrated in classes. Previously I used the library.* • *Right by your hand, I always have my computer open* • *You may look up something during classes and impress the teachers* • *Always a lot of results, everything is there [at the Internet]* • *May search on English words* • *Easy access to information [from the Internet]*
Third year pupils (3g):
• *The Internet, everything is out there, you almost always get a hit when you search on it [search word], but when you start to dig a little bit deeper down, it gets difficult* • *It [the Internet] is simple and fast* • *Plenty of stuff about everything; it [the Internet] makes it easier for you to get access to the information you want*

If you should give somebody a good advice in relation information searching what would that be?
First year pupils (1g):
• *Be critical* • *Use more search words* • *Do not take the first result for granted* • *Check out more result pages*
Third year pupils (3g):
• *Do not give up, just keep on going* • *Be critical, spend at least 5 minutes to read one's page [result pages]* • *Be thorough when you assess the relevance of a search result* • *Leave enough time for it [information searching] …to find something good*

Table 3*. Abbreviated versions of pupils' answers across class levels to three focus group questions.*

The *pupils from 1g* tended to approach information searching in different ways, hence, demonstrated different information skills, search strategies and preferences during the interview.

They use between 1-3 search words, and only a few of the pupils mention specific search techniques associated with Google. If a search results in no hits they get frustrated, try out other search words or ask their parents. When they are presented with a result list in Google they generally look for references to Wikipedia as a good starting point. A few read the summaries below the title or the date. As one said " if it is 20 years old, it is a bad reference". The design of a website is also used by many as an indicator of professionalism. They typically scroll 1 to 3 result pages; if the result is pictures more pages are scanned through. Bookmarks are used by half of the group. Everybody has been introduced to the Study Center, but no one is using it. "It works alright by the way I search information" as one said. Their experience with the library is associated negatively with coercion. The local library – both the digital and the physical library - is used to renew loans or to check whether specific material is available. Visits to the local library are also determined by geographical distance.

Compared to the pupils from 1g, the *3g-pupils* generally had a more analytical and self-reflective approach to their information seeking behaviour. Across the group, though, they also demonstrated different information skills, search strategies and preferences. Information searching tends to depend on the type of assignment and the specific step in the assignment process. If it is a minor assignment it is not necessary to use the library or books - Google and Wikipedia fulfill their information need. But when information is needed for an analysis or a major assignment it starts to get difficult with Internet searching. Information is then assessed more critically. Material that has been put on the intranet by the teacher is perceived as a service and an easy way to get information. The level of the material, however, often requires some pre-understanding of the topic that is obtained easier with Google as a starting point, as one in the group mentioned. They know from the teachers that Google and Wikipedia are information sources of low quality and should not go into any reference list, but they are still used. The pupils use different search strategies to satisfy their information needs. The number of search words varies between one and a whole sentence depending on the subject and the strategy chosen to control the search result. The explanations for choosing one or many search words demonstrate differences in search skills. Pictures are searched for in Google to get an illustration or to bounce to the specific webpage the picture originates from. When presented with a search result more of the pupils start to look at the first reference – often from Wikipedia, which gives a good overview. The correctness of information on one site is sometimes checked by comparing it with the information on another but related website. The design of a website is also mentioned in this group as an indicator of credibility. The publisher of a website is only important to some of the pupils. Nobody uses bookmarks. The Study Center and the local library is primarily used in relation to major assignments; "When you have three days off for writing, then you may pull yourself together and visit the Study Center", as one explained. "It is faster with the Internet, but sometimes is easier with the Study Center and you get a good instruction by the librarian" as another pointed out. Some of the pupils only visit the library after having checked out on the Internet that a specific material is available. The participants in this group have participated in two 2-hour searching courses at the Study Center during which they were introduced to specific databases and reference works as well as trained in how to compose a reference list for their assignments, which was appreciated. However, the different logins that are required for the databases keep some of the pupils from using them – it is time consuming. The search tasks in the search course also need to be more personally relevant to motivate the pupils. With regard to the outcome "…it is up to one self if you actually *like* to learn it. This is probably the problem in essence", as one said. Another pupil stated that she probably could be an expert in searching, but that she would never put the effort into it. She succeeds in finding information to fulfill her needs now and accepts the extra time it may require. Another barrier to

visiting the Study Center was that it is considered small compared to the local library. Further, it was a problem that one cannot borrow the encyclopedia, as one mentioned. Geographic distance to the library also influences the pupils' frequency of use in this group. When asked to comment on their perceived progress since 1g they have become better at looking up subjects in an encyclopaedia and have developed a more critical attitude when assessing search results. They search in the same way but with greater speed, which may affect the idea of thoroughness in information searching, though. Moreover, they have started to prefer a relevant book to a number of Internet materials.

Perceptions of the Pupils' Information Behaviour from a Study Center Perspective

The secondary school pupils' information behaviour as reflected in surveys and interviews is to a large extent in congruence with the experiences of the librarian at the Study Center. According to her, Google and Wikipedia are the preferred resources, the pupils have difficulties in formulating their information needs, even though believing themselves to be expert searchers. They tend to have a blind faith in Google's relevance ranking and often give up if no relevant results are found within the first three hits. They also very easy give up when searching in databases or other library resources – they simply do not know how to formulate queries and do not want to spend time on it either. They need to be more reflective about their choice and use of information sources. To some pupils the length of an article or an assignment on the Internet tends to be a quality in itself. With regard to differences in behaviour pupils' individual differences are more striking than differences due to class level. The use of the Study Center is experienced as having increased since the reform, but still need more integration into the curricula at FG.

Discussion

When comparing results from this study with previous studies many similarities can be found, but also results that stress the relevance of a follow up study in a large scale context.

In line with OCLC (2006), Pors (2005; 2007) and Rowlands et al., 2008) the secondary school pupils in this study preferred Google to all other information resources and it was generally used as the starting point to all information needs. Moreover Google seemed to be well integrated into the pupils' everyday life, thus, easily accessed whenever needed. No 'interface' was experienced between and information need and information – in contrast to using library resources. Like Pors (2005; 2007) this study also found that the library (digital and physical) and the Study Center was used infrequently; primarily in relation to major assignments. Further, library resources were often spoken of in negative terms such as being difficult, time consuming, required in addition to holding 'old stuff' in contrast to the Internet. This study also found a slight difference across gender in the use of library resources, which may suggest experiments with differentiated IL programs.

When it comes to the hypothesis about the Google Generation the pupils tended to conform with and support the statements about their ICT skills and information behaviour. Interestingly, though, pupils from 3g were generally more critical and reflective about their information behaviour than the pupils from 1g. The same difference was also found in Pors (2007). This may be explained by the mere difference in curricula requirements and the whole idea of preparing secondary school children for higher education. It may also be an effect of the new reform. However, it seemed that the critical skills only regarded how they *thought of* and *reflected* about information seeking, and not how it was actually *practiced.* When it came to searching and relevance assessment, the pupils from 3g generally tended to experience more problems than the 1g-pupils, which among others were associated with assignment complexity. Difficulties were also presented by the pupils from 1 g, but they tended to have more confidence in their

own skills or to bother less compared to the pupils from 3g. The discrepancy between perceived information skills and information behaviour in practice supports the very same conclusion made by the CIBER group. Another interesting discrepancy was identified, as it turned out that the pupils across class level actually seemed to *know what* would be the optimal way of acting when searching for information, but just did not seem to *know how.* One explanation of this finding may simply be that the 'knowing how' is in conflict with a rational approach to information practice associated with speed, power browsing, simplicity and least effort. Then how do we cope with that in an information literacy context? How do we address this in design of information systems and services? And how do we motivate the young people to spend more time and effort in information seeking? They need not only to be interested in the fish, they also need to know *how* to fish. However, students with low information literacy skills may not benefit from attempts to upgrade these skills simply because they do not believe they need help (Gross & Latham, 2007). From previous research we know that students with better information skills had been exposed to basic library skills from their parents, in the school library, classroom or public library in their earlier years (Rowlands et al., 2008), meaning that the development of these skills need to take place during the formative school years. In these times of the social web critical information seeking skills are not sufficient; young people must also possess critical information *creation* skills to contribute qualified to the 'information food chain' of Society.

Conclusion

This paper has presented and discussed the results of an exploratory case study of 43 Danish secondary school pupils' information behaviour. The aim of the study was to further investigate the myths about the young and to what extent they are consistent with reality. Four research questions guided the study: 1) What characterizes the information behaviour of Danish secondary school pupils? 2) How is information seeking conceptualized and experienced by secondary school pupils? 3) How is the local study centre and library conceptualized and experienced? 4) How does the information behaviour of secondary school pupils differ across class level?

It was found that the information behaviour of secondary school pupils to a large extent conformed with the negative myths of the Google Generation in terms of information literacy and preferences for information resources. However, pupils at their third year generally tended to be more critical and to demonstrate more critical information skills, particularly at a cognitive level. Differences across gender were also identified in this study. As another interesting finding many of the pupils actually *knew* what would be the optimal way of acting when searching for information, but did not seem to know *how*. This 'optimal' behaviour is, however, in conflict with a rational approach to information practice across secondary school pupils, associated with speed, power browsing, simplicity and least effort. These results will be further investigated and discussed in future in a larger study on secondary school pupils' information behaviour in order to guide the way library services and digital information systems are designed in addition to facilitate how IL-programs are developed and implemented in an educational practice.

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